



CITY OF HELENA BUILDING DIVISION



"BITS"

Miscellaneous "BITS" of information that may be of interest to the City of Helena Contractors and Design Professionals
February 2011

'KNEE WALLS' REQUIRE INSULATION AND AIR BARRIERS

"Knee walls" separating conditioned from non-conditioned spaces in a structure are required to be insulated and an air barrier provided in order to meet the requirements of Section 402.4.1 of the 2009 edition of the International Energy Conservation Code (IECC). These provisions apply to both conventionally framed knee walls and the knee walls created by an attic style truss, (ex. cathedrals and bonus rooms).

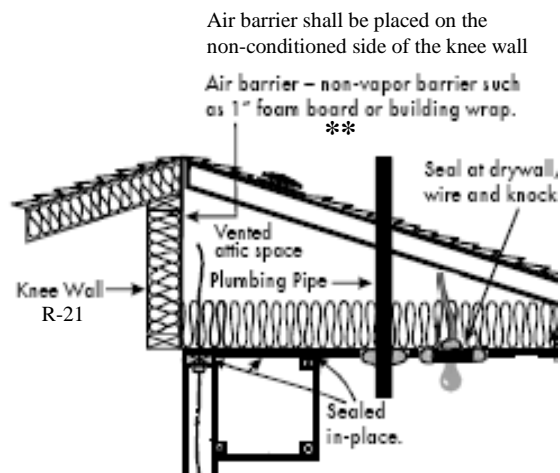
IECC, Section 402.4.1 Building thermal envelope.

The building thermal envelope shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material:

1. All joints, seams and penetrations.
2. Site-built windows, doors and skylights.
3. Openings between window and door assemblies and their respective jambs and framing.
4. Utility penetrations.
5. Dropped ceilings or chases adjacent to the thermal envelope.
6. **Knee walls.**
7. Walls and ceilings separating a garage from conditioned spaces.
8. Behind tubs and showers on exterior walls.
9. Common walls between dwelling units.
10. Attic access openings.
11. Rim joist junction.
12. Other sources of infiltration.

Definition per State of Montana ARM, Section 24.301.161(c): "Air Barrier"— Material(s) assembled and joined together to provide a barrier to air leakage through and into the building envelope. An air barrier may be a single material or a combination of materials.

All cracks and penetrations into and through the building envelope are to be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material. Examples of air barrier materials include caulking materials, foam backer rod, expanding foam products, rigid foam or sheathing products with edges and seams sealed or sealed film material such as polyethylene film. Fiberglass and cellulose insulation will not stop airflow and does not qualify as an air barrier.



** Foam insulation shall be covered with an ignition barrier in accordance with IRC, Section R314.5.3 unless it complies with Section R314.6.

ATTIC KNEE WALL

